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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,354	03/31/2004	Patrick Chiu	FXPL-01094US0	8294
23910 7590 10/16/2008 FLIESLER MEYER LLP 650 CALIFORNIA STREET 14TH FLOOR SAN FRANCISCO, CA 94108				
EXAMINER PARK, EDWARD				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/815,354

Applicant(s)

CHIU ET AL.

Examiner

EDWARD PARK

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This action is responsive to applicant's amendment and remarks on 7/25/08. Claims 1-21 are currently pending.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 1, 10, 12** are rejected under 35 U.S.C. 102(b) as being anticipated by Jun et al (US 2001/0020981 A1).

Regarding **claim 1**, Jun teaches a method for generating a highly condensed visual summary of video regions, comprising:

determining a dominant group in each of a plurality of video segments (Jun: paragraphs [0023]-[0024]);

determining a key frame in each of the video segments (Jun: paragraphs: [0023]-[0024]);

defining a germ associated with each dominant group in each of the video segments, wherein the video segment less the germ defines a support in each of the video segments (Jun: paragraph [0051], figure 13b, [0074-0075], region of interest is read as "a germ", key regions represent the entire contents of the scene and the area around the key region is considered "a support");

separating the germ from the video segments (see figure 13b, paragraphs [0074-0075], synthetic key frame Fsk according to the present invention can present an image combining key regions representing the entire content of the scene without selecting a key frame representing a scene, therefore the synthetic key frame Fsk can summarize the entire contents of the scene);

laying out the germs on a canvas (see figure 13b, synthetic key frame is considered as a canvas); and

filling in the space of the canvas between the germs, wherein filling the space of the canvas between the germs includes laying out one or more portions of the supports, wherein the one or more portions of the supports are positioned in the space such that at least one pixel value of the support relative to the closest germ is positioned corresponding to the position of that pixel value relative to the germ from which it was separated, wherein the canvas generated is a highly condensed visual summary of the plurality of video segments (Jun: figures: 13a, 13b, 17, paragraphs [0074]-[0076], Examiner notes that it can be seen in figure 13a, for example, that the germ is a region of interest, and the claim limitation filling in the space of the canvas between the germs only brings in the limitation of occupying the canvas with any additional image that is not part of the region of interest, which can be seen in figure 13a in the Fsk. The region of interest "germ" can be the head of the person; and any other background imagery that is not part

of the region of interest which is seen in the figure will meet the limitation of the claim. Furthermore, the limitation where one or more portions of the supports are positioned in the space is inherent when the regions of interest are entered into the synthetic key frame. This is due to the fact that each region of interest has a support that is by default closest to the region of interest or "germ". Also, the synthetic key frame Fsk can summarize the entire contents of the scene).

Regarding **claim 10**, Jun teaches a method for generating a highly condensed visual summary of video regions, comprising:

determining a germ in each of a plurality of images, the germ containing a region of interest, wherein the video region less the germ defines a support in each of the video regions (Jun: paragraph [0051], figure 13b, [0074-0075], region of interest is read as "a germ", key regions represent the entire contents of the scene and the area around the key region is considered "a support");

separating the germ from the video segments (see figure 13b, paragraphs [0074-0075], synthetic key frame Fsk according to the present invention can present an image combining key regions representing the entire content of the scene without selecting a key frame representing a scene, therefore the synthetic key frame Fsk can summarize the entire contents of the scene);

laying out the germs on a canvas (see figure 13b, synthetic key frame is considered as a canvas); and

filling in the space of the canvas between the germs by laying out one or more parts of the support, wherein at least one pixel in the space corresponds to the support pixel from the closest germ, wherein the canvas generated is a highly condensed visual summary of video

regions (Jun: figures: 13a, 13b, 17, paragraphs [0074]-[0076], Examiner notes that it can be seen in figure 13a, for example, that the germ is a region of interest, and the claim limitation filling in the space of the canvas between the germs only brings in the limitation of occupying the canvas with any additional image that is not part of the region of interest, which can be seen in figure 13a in the Fsk. The region of interest "germ" can be the head of the person; and any other background imagery that is not part of the region of interest which is seen in the figure will meet the limitation of the claim. Furthermore, the limitation where one or more portions of the supports are positioned in the space is inherent when the regions of interest are entered into the synthetic key frame. This is due to the fact that each region of interest has a support that is by default closest to the region of interest or "germ". Also, the synthetic key frame Fsk can summarize the entire contents of the scene).

Regarding **claim 12**, Jun teaches receiving user input, the user input associated with a part of an image (Jun: paragraph [0077]).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 2-6, 13-15, 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Jun et al (US 2001/0020981 A1) in view of Uchihashi (ACM Multimedia: “Video Manga: Generating Semantically Meaningful Video Summaries”).

Regarding **claim 2**, Jun discloses all elements as mentioned above in claim 1. Jun does not teach determining a group within each of the plurality of video segments having the largest volume.

Uchihashi teaches determining a group within each of the plurality of video segments having the largest 3-D volume (Uchihashi: section 4.2, length of the segment is scored).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Jun reference to determine a group having the largest volume as taught by Uchihashi, in order to “calculate an importance score for each segment based on its rarity and duration” since “a segment is deemed less important if it is short or very similar to other segments” (Uchihashi: section 4.2).

Regarding **claims 3, 4, and 20**, Jun discloses all elements as mentioned above in claim 1. Jun does not teach defining a two dimensional shape that encompasses the projection of the dominant group onto the key frame; wherein the two dimensional shape is a rectangle; and using an algorithm to determine a region of interest of an image.

Uchihashi teaches defining a two dimensional shape that encompasses the projection of the dominant group onto the key frame (Uchihashi: figure 2; section 4.4) and wherein the two dimensional shape is a rectangle (Uchihashi: figure 2; section 4.4).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Jun reference to define a two dimensional shape that is a rectangle as taught

by Uchihashi, in order to “form a pictorial abstract of the video sequence” where a “sequence of frames fills space efficiently and represents the original video sequence well” (Uchihashi: section 4.4).

Uchihashi further teaches using an algorithm to determine a region of interest of an image (Uchihashi: figure 4.2).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Jun with Uchihashi combination as mentioned above to determine a region of interest of an image as taught by Uchihashi, “to select appropriate keyframes for a compact pictorial summary” (Uchihashi: section 4.2).

Regarding **claims 5 and 6**, Jun with Uchihashi discloses all elements as mentioned above in claim 3. Jun with Uchihashi as mentioned in claim 3, does not teach determining a scale factor to be applied to every germ such that the germs are scaled to the maximum size that fits into the canvas and placing the germs in rows, wherein each row has a height according to the longest germ in the particular row.

Uchihashi further teaches determining a scale factor to be applied to every germ such that the germs are scaled to the maximum size that fits into the canvas (Uchihashi: section 4.3, 4.4) and placing the germs in rows, wherein each row has a height according to the longest germ in the particular row (Uchihashi: figure 2).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Jun with Uchihashi combination to place the germs in a row as taught by Uchihashi, to “fill space efficiently and represent the original video sequence well” (Uchihashi: section 4.2).

Regarding **claim 13**, Jun discloses all elements as mentioned above in claim 10. Jun does not disclose using an algorithm to determine the regions of interest of an image based on one or more methods selected from the group consisting of a general image analysis algorithm, a face-detection algorithm, and object detection algorithms and user input.

Uchihashi teaches using an algorithm to determine the regions of interest of an image based on one or more methods selected from the group consisting of a face-detection algorithm (see section 4.2, section 6, segment is scored and weighted, detecting human close-ups and other image types to further improve the summaries), and object detection algorithms (see section 4.2, section 6, segment is scored and weighted, detecting human close-ups and other image types to further improve the summaries) and user input.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Jun reference to determine the regions of interest with a face-detection algorithm or a object detection algorithms as taught by Uchihashi, “to select appropriate keyframes for a compact pictorial summary” (Uchihashi: section 4.2).

Regarding **claims 14 and 15**, Jun reference discloses all elements as mentioned above in claim 10. Jun reference as mentioned in claim 10, does not teach determining a scale factor to be applied to every germ such that the germs are scaled to the maximum size that fits into the canvas and placing the germs in rows, wherein each row has a height according to the longest germ in the particular row.

Uchihashi further teaches determining a scale factor to be applied to every germ such that the germs are scaled to the maximum size that fits into the canvas (Uchihashi: section 4.3, 4.4)

and placing the germs in rows, wherein each row has a height according to the longest germ in the particular row (Uchihashi: figure 2).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Jun reference to place the germs in a row as taught by Uchihashi, to “fill space efficiently and represent the original video sequence well” (Uchihashi: section 4.2).

6. **Claims 7-9, 16-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Jun et al (US 2001/0020981 A1) in view of Hirata (US 6,922,485 B2).

Regarding **claims 7-9**, Jun discloses all elements as mentioned above in claim 1. Jun does not teach assigning a pixel value of each point in the canvas to the same pixel value in the support associated with the germ closest to each point; wherein if the germ closest to the point does not have a support that includes the point, the point is assigned the pixel value of the closest germ with a support that includes the point; wherein the point is assigned a background value if no support includes the point.

Hirata teaches assigning a pixel value of each point in the canvas to the same pixel value in the support associated with the germ closest to each point (see col. 8, lines 62-67; col. 9, lines 1-14); wherein if the germ closest to the point does not have a support that includes the point, the point is assigned the pixel value of the closest germ with a support that includes the point (see col. 8, lines 62-67; col. 9, lines 1-14); wherein the point is assigned a background value if no support includes the point (see col. 8, lines 62-67; col. 9, lines 1-14).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Jun reference to assign pixel value to a germ that is closest as taught by

Hirata, to create an aesthetically/visually pleasing image to the user by removing white spaces between germs.

Regarding **claims 16-18**, Jun discloses all elements as mentioned above in claim 10. Jun does not teach assigning a pixel value of each point in the canvas to the same pixel value in the support associated with the germ closest to each point; wherein if the germ closest to the point does not have a support that includes the point, the point is assigned the pixel value of the closest germ with a support that includes the point; wherein the point is assigned a background value if no support includes the point.

Hirata teaches assigning a pixel value of each point in the canvas to the same pixel value in the support associated with the germ closest to each point (see col. 8, lines 62-67; col. 9, lines 1-14); wherein if the germ closest to the point does not have a support that includes the point, the point is assigned the pixel value of the closest germ with a support that includes the point (see col. 8, lines 62-67; col. 9, lines 1-14); wherein the point is assigned a background value if no support includes the point (see col. 8, lines 62-67; col. 9, lines 1-14).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Jun reference to assign pixel value to a germ that is closest as taught by Hirata, to create an aesthetically/visually pleasing image to the user by removing white spaces between germs.

7. **Claims 11, 19** is rejected under 35 U.S.C. 103(a) as being unpatentable over Jun et al (US 2001/0020981 A1) in view of Li et al (US 7,035,435 B2).

Regarding **claim 11**, Jun discloses all elements as mentioned above in claim 10. Jun does not teach detecting a face in each of the plurality of images.

Li teaches detecting a face in each of the plurality of images (Li: col. 7, lines 33-51).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Jun reference to detect a face as taught by Li, in order to determine the importance of a frame since “a human face will be more informative than, for example, a landscape frame” (Li: col. 7, lines 33-51).

Regarding **claim 19**, Jun discloses all elements as mentioned above in claim 1. Jun does not teach detecting a face in each of the plurality of images.

Li teaches detecting a face in each of the plurality of images (Li: col. 7, lines 33-51).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Jun reference to detect a face as taught by Li, in order to determine the importance of a frame since “a human face will be more informative than, for example, a landscape frame” (Li: col. 7, lines 33-51).

8. **Claim 21** is rejected under 35 U.S.C. 103(a) as being unpatentable over Jun et al (US 2001/0020981 A1) in view of Lin et al (US 6,307,964 B1).

Regarding **claim 21**, Jun discloses all elements as mentioned above in claim 1. Jun does not disclose using a Voronoi algorithm to determine the shape of the support to be placed on the canvas.

Lin, in the same field of endeavor, teaches using a Voronoi algorithm to determine the shape of the support to be placed on the canvas (see col. 2, lines 41-46, representing a shape of an object in an image).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Jun reference to utilize a Voronoi algorithm as taught by Lin, in order

increase the “effectiveness of a shape descriptor” by being “able to capture the structural information of the shape, yet be robust to noise within the boundary [to] yield the most favorable result” (see col. 2 lines 32-40).

Response to Arguments

9. Applicant's arguments filed on 7/25/08, in regards to claims 1 and 10 have been fully considered but they are not persuasive. Applicant argues that the newly added limitations to the independent claims 1 and 10 are not taught by the prior art of record, Jun (see pg. 7, 8). This argument is not considered persuasive since the newly added limitations are disclosed by Jun and can be seen above in the rejection of claims 1 and 10.

Regarding claim 12, applicant argues that the claim is patentable due to the dependency from claim 10 (see pg. 9, second paragraph). This argument is not considered persuasive since claim 10 stands rejected and the argument and rejection of the claim can be seen above.

Regarding claim 1, applicant argues that Jun does not explicitly teach separating the video region into a germ and a support and then filling the space with the support as outlined in amended claim 1 (see pg. 10 first paragraph). This argument is not considered persuasive since Jun discloses in figure 13b, paragraphs [0074-0076], synthetic key frame Fsk according to the present invention can present an image combining key regions representing the entire content of the scene without selecting a key frame representing a scene, therefore the synthetic key frame Fsk can summarize the entire contents of the scene, where synthetic key frame is considered as a canvas. Furthermore, the limitation where one or more portions of the supports are positioned in

the space is inherent when the regions of interest are entered into the synthetic key frame. This is due to the fact that each region of interest has a support that is by default closest to the region of interest or "germ". Applicant argues that Jun nor Uchihashi teach the limitations of claim 1 and therefore claim 1 was not obvious at the time the invention was made (see pg. 10, second paragraph). This argument is not considered persuasive since Jun does disclose all the limitations of claim 1 as seen above and furthermore claim 1 is rejected under 35 U.S.C. 102, not 35 U.S.C. 103.

Regarding claim 2, applicant argues that Uchihashi does not disclose 3-D volume (see pg. 11, first paragraph). This argument is not considered persuasive since the applicant even states on pg. 11, first paragraph that a video can be regarded as a three dimensional volume in x-y-t space and this limitation is taught in Uchihashi, section 4.2, where the length of the segment is scored based on the length of the segment. The importance measure becomes larger if the segment is long. Applicant argues that Uchihashi does not project[ing] the dominant group onto the key frame (see pg. 11, second paragraph). This argument is not considered persuasive since claim 2 does not disclose or iterate the limitations argued by the applicant. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., project[ing] the dominant group onto the key frame) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Furthermore, the applicant argues that the Uchihashi reference does not teach determining a group within each of the plurality of video segments (see pg. 11, second paragraph). This argument is not considered persuasive

since in section 4.2, Uchihashi discloses for a good summarization, many segments must be discarded or de-emphasized to select appropriate keyframes for a compact pictorial summary, in essence grouping in terms of importance and relevance.

Regarding claim 10, applicant argues that Jun does not explicitly teach separating the video region into a germ and a support and then filling the space with the support as outlined in amended claim 10 (see pg. 12, first paragraph). This argument is not considered persuasive since Jun discloses in figure 13b, paragraphs [0074-0076], synthetic key frame Fsk according to the present invention can present an image combining key regions representing the entire content of the scene without selecting a key frame representing a scene, therefore the synthetic key frame Fsk can summarize the entire contents of the scene, where synthetic key frame is considered as a canvas. Furthermore, the limitation where one or more portions of the supports are positioned in the space is inherent when the regions of interest are entered into the synthetic key frame. This is due to the fact that each region of interest has a support that is by default closest to the region of interest or "germ". Applicant argues that Jun nor Uchihashi teach the limitations of claim 1 and therefore claim 1 was not obvious at the time the invention was made (see pg. 12, second paragraph). This argument is not considered persuasive since Jun does disclose all the limitations of claim 1 as seen above and furthermore claim 1 is rejected under 35 U.S.C. 102, not 35 U.S.C. 103.

Regarding claims 2-6, 13-15 and 20, applicant argues that the claims are allowable due to the dependency from claims 1 and 10, respectively (see pg. 12, third paragraph). This argument is not considered persuasive since claims 1 and 10 stand rejected and the arguments and rejection can be seen above.

Regarding claim 1, applicant argues redundantly on pg. 12, last paragraph as seen before in the arguments/remarks by the applicant. This argument is not considered persuasive since the argument has already been addressed and can be seen above for the argument for claim 1.

Regarding claims 7, 8, and 9, applicant argues that the Hirata reference does not disclose the limitations of claims 7, 8, and 9 (see pg. 13, second paragraph, pg. 14, last paragraph, pg. 15, second paragraph). This argument is not considered persuasive since Hirata does teach the limitations and more importantly, the applicant incorrectly refers to the wrong passage within Hirata to teach the limitations of the multiple claims. Applicant refers to col. 6, lines 62-67 - col. 7, lines 1-4, which is incorrect. The previous rejection clearly states that the limitations are taught in Hirata in col. 8, lines 62-67; col. 9, lines 1-14. It is shown that the applicant incorrectly states the wrong passage on pg. 13 and 14, by adding a complete text of Hirata, verbatim. Therefore, the applicant's argument is not considered persuasive since the applicant utilizes the wrong passage to disagree with the Examiner's interpretation.

Regarding claim 10, applicant argues redundantly on pg. 15, last paragraph, pg. 16, first paragraph as seen before in the arguments/remarks by the applicant. This argument is not considered persuasive since the argument has already been addressed and can be seen above for the argument for claim 10.

Regarding claims 7-9, 16-18, applicant argues that the claims are allowable due to the dependency from claims 1 and 10, respectively (see pg. 16, second paragraph). This argument is not considered persuasive since claims 1 and 10 stand rejected and the arguments and rejection can be seen above.

Regarding claims 11, 19, applicant argues that the claims are allowable due to the dependency from claims 1 and 10, respectively (see pg. 17, second paragraph). This argument is not considered persuasive since claims 1 and 10 stand rejected and the arguments and rejection can be seen above.

Regarding claim 21, applicant argues that Lin does not disclose using a Voronoi algorithm to determine the shape of the support to be placed on the canvas (see pg. 17, last paragraph). This argument is not considered persuasive since Lin discloses in col. 2, lines 41-46, representing a shape of an object in an image utilizing Voronoi ordering. The Lin reference is only utilized to bring incorporate the concept of utilizing the Voronoi algorithm with the Jun reference, no more or less. It is the combination of the two references that meet the limitation of claim 21, not just Lin. Applicant further argues that the applicant's Voronoi algorithm computes the boundary curves between the germs, so the contours are part of the output and to fill in the space between the germs, with respect to a plurality of output shapes (see pg. 17, last paragraph). This argument is not considered persuasive since the claim limitations do not disclose these limitations, but rather these limitations are read in from the specification. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., Voronoi algorithm computes the boundary curves between the germs, so the contours are part of the output and to fill in the space between the germs, with respect to a plurality of output shapes) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26

USPQ2d 1057 (Fed. Cir. 1993). Examiner notes that claim 21 only calls for a Voronoi algorithm to determine the shape of the support to be placed on the canvas.

Regarding claims 21, applicant argues that the claims are allowable due to the dependency from claim 1 (see pg. 18, second paragraph). This argument is not considered persuasive since claim 1 stands rejected and the arguments and rejection can be seen above.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to EDWARD PARK whose telephone number is (571)270-1576. The examiner can normally be reached on M-F 10:30 - 20:00, (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vikram Bali can be reached on (571) 272-7415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Edward Park
Examiner
Art Unit 2624

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Examiner, Art Unit 2624

/Vikram Bali/
Supervisory Patent Examiner, Art Unit 2624